

**Remarks**

Claims 1, 6-19, and 149-163 are currently pending and under examination. No claims are amended, canceled, or added by this Response. No new matter is introduced.

Applicant acknowledges that the Examiner indicated he has withdrawn previous rejection of claims 1, 6, 19, and 147-163 under 35 U.S.C. § 112, second paragraph; claim 157 under 35 U.S.C. § 102(b) as being allegedly anticipated by U.S. Pat. No. 5,514,581 to Ferrari et al.; claims 1-6, 14-16, 18-19, 147-148, 152-154, 158-160, and 162-163 under 35 U.S.C. § 102(b) as being allegedly anticipated by U.S. Pat. No. 5,196,510 to Rodwell et al.; and claims 1-2, 5, 14-15, 18, 147, 158-159, and 162 under 35 U.S.C. § 102(e) as being allegedly anticipated by U.S. Pat. No. 6,447,765 to Horwitz as evidenced by the known fact disclosed in the publication Bazan JF (1992) *Science* 257:410-3 [sic].

Applicant also acknowledges that the Examiner indicated that claims 7-10, 13, 150-151, and 157 are objected to as being dependent upon rejected base claims 1 and 19, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Rejections Under 35 U.S.C. § 112, Second Paragraph***

The Examiner indicated that claims 15 and 154 are rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. Applicant respectfully disagrees, and, for reasons set forth below, requests the Examiner to reconsider and withdraw his rejection of claims 15 and 154 under 35 U.S.C. § 112, second paragraph.

The Examiner alleged that claim 15 is unclear because recitation of “non-native polypeptide” ambiguously refers to (i) a denatured form of said polypeptide which structurally and functionally differs from the native form of the polypeptide or (ii) a recombinantly produced

or chemically modified polypeptide. The Examiner asserted that the specification does not provide sufficient definition for this recitation. In response, Applicant respectfully wishes to direct the Examiner's attention to page 23, lines 28-30 of the specification, where appears a definition of "non-natural polymer" as "... a polymer that differs in composition or sequence from native naturally occurring polymers. It could not be prepared solely by isolation from natural sources without further modification." In view of the definition so provided, Applicant submits that recitation of "non-natural polypeptide" clearly refers to a polypeptide that differs in composition or sequence from native naturally occurring polypeptides and could not be prepared solely by isolation from natural sources without further modification. Accordingly, Applicant respectfully submits that the recitation of "non-native polypeptide" is not unclear and therefore requests the Examiner to reconsider and withdraw the rejection of claim 15 under 35 U.S.C. § 112, second paragraph.

The Examiner also alleged that claim 154 is unclear in "... are on adjacent amino acids" because "adjacent" can ambiguously refer to proximity in a space, e.g., in ternary structure, or in primary structure, i.e., amino acid sequence. Applicant respectfully disagrees and submits that persons of skill in the art to which the invention pertains, upon reading the specification taken as a whole, would understand that the term "adjacent" as used in this context is used in the sense of primary structure. For example, the specification at pages 19-21 discloses (i) repeating charge motifs separated by intervening sequence of at least 32 Å, (ii) positively charged free amino moieties of the at least two repeating charge motifs separated by a distance of at least 8 amino acid residues, and (iii) charged units of the [repeating charge] motif may be separated by any number but preferably by less than 10 neutral units. Applicant submits that these representative passages make most sense when read with the understanding that they are descriptions couched in terms of primary structure. Applicant therefore respectfully submits that the term "adjacent" when viewed in context is not unclear, and, accordingly, requests the Examiner to reconsider and withdraw the rejection of claim 154 under 35 U.S.C. § 112, second paragraph.

***Rejections Under 35 U.S.C. § 102***

The Examiner indicated that claims 1, 6, 11-12, 14-19, 149, 152-156, and 158-163 are rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by U.S. Pat. No. 5,514,581 to Ferrari et al. More specifically, the Examiner made this rejection on the basis of SEQ ID NO:66 of Ferrari et al. For reasons set forth below, Applicant respectfully disagrees and requests the Examiner to reconsider and withdraw the rejection of claims 1-6, 11-12, 14-19, 149, 152-156, and 158-163 under 35 U.S.C. § 102(b) as being anticipated by Ferrari et al.

In response to the previous office action, Applicant amended claims 1 and 19 to specify that the polymer of claim 1, and likewise the polypeptide of claim 19, is composed entirely of identical repeating units. In contrast, and as tacitly conceded by the Examiner on page 6 of the present office action, the polypeptide of Ferrari et al. includes but is not composed entirely of identical repeating units. More specifically, SEQ ID NO:66 of Ferrari et al., as relied upon by the Examiner in making the rejection, can be rewritten using single-letter amino acid symbols as follows:

MDPVVLQRRDWENPGVTQLNRLAAHPPFASDPM  
GAPGPPGPPGPPGPPGAPGPPGPPGPPGLPGPKGDRGDAGPKGADGSPGPAGPVGSP  
GAPGPPGPPGPPGPPGAPGPPGPPGPPGLPGPKGDRGDAGPKGADGSPGPAGPVGSP  
GAPGPPGPPGPPGPPGAPGPPGPPGPPGLPGPKGDRGDAGPKGADGSPGPAGPVGSP  
GAPGPPGPPGPPGPPGAPGPPGPPGPPGLPGPKGDRGDAGPKGADGSPGPAGPVGSP  
GAPGPPGPPGPPGPPGAPGPPGPPGPPGLPGPKGDRGDAGPKGADGSPGPAGPVGSP  
GAMCAHRYQLSAGRYHYQLVWCQK

where the underlined sequence GPKGDRGDAGPKGADGS is the identical repeating unit pointed out by the Examiner on page 4 of the Office Action. As can be readily appreciated from the above, SEQ ID NO:66 of Ferrari et al. is not composed entirely of identical repeating units at least because each of the amino terminal sequence MDPVVLQRRDWENPGVTQLNRLAAHPPFAS-DPM and the carboxy terminal sequence GAMCAHRYQLSAGRYHYQLVWCQK appears only once in SEQ ID NO:66. Therefore Applicant respectfully submits that, contrary to the assertion of the Examiner, SEQ ID NO:66 of Ferrari et al. is not composed entirely of identical repeating units

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and does not anticipate claim 1 or claim 19. Claims 6, 11-12, and 14-18 all depend from claim 1, and claims 149, 152-156, and 158-163 all depend from claim 19. Accordingly, Applicant respectfully requests the Examiner to reconsider and withdraw the rejection of claims 1, 6, 11-12, 14-19, 149, 152-156, and 158-163 under 35 U.S.C. § 102(b) as being anticipated by Ferrari et al.

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**Summary**

Arguments are presented in response to rejections made under 35 U.S.C. § 112, paragraph 2, and 35 U.S.C. § 102. For reasons set forth above, the Examiner is urged to withdraw all rejections.

Applicant believes the claims are in condition for allowance. A prompt and favorable action is earnestly solicited.

Respectfully submitted,  
*Tzianabos, et al., Applicant*



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